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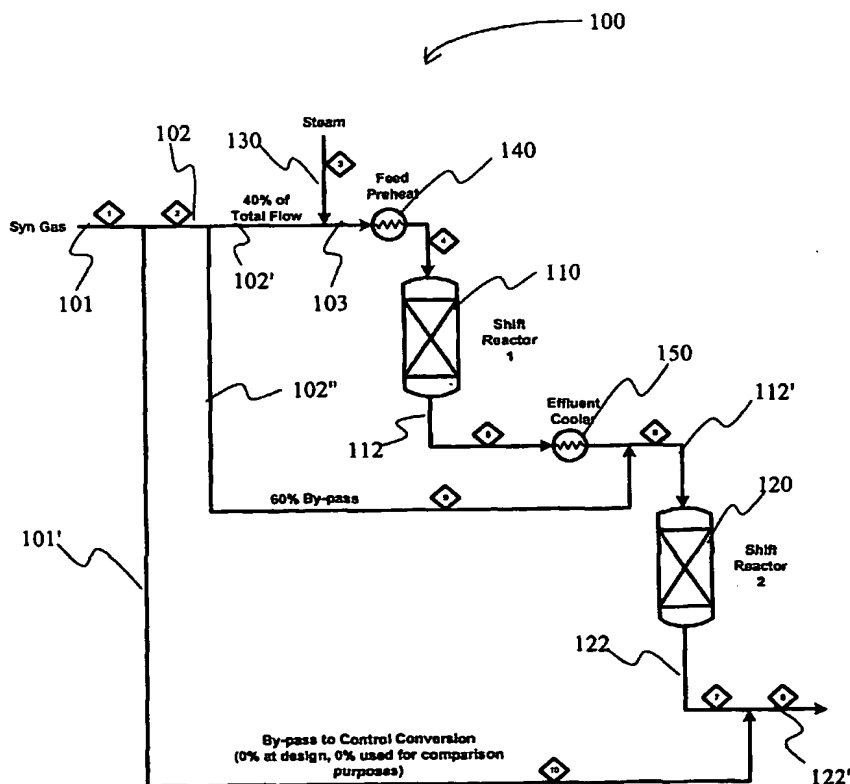
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(54) Title: **IMPROVED CONFIGURATION AND PROCESS FOR SHIFT CONVERSION**



(57) Abstract: Overall steam demand for hydrogen production in shift reactor is lowered by splitting the syngas feed stream (101) into first portion (102') and second portion (102''). The first portion (102') is fed to a first shift reactor (110) to form a first product (112). The first product (112) is combined with the second portion (102'') of the syngas feed prior to entering a second shift reactor (120).



GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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# INTERNATIONAL SEARCH REPORT

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## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C10K 3/04

US CL : 48/128, 198.3; 422/188-191, 193, 211; 423/246-247, 655

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 48/128, 198.3; 422/188-191, 193, 211; 423/246-247, 655

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| A          | US 3,904,389 A (BANQUY) 9 September 1975 (09.09.1975)                              | 1-15                  |
| A          | US 4,476,683 A (SHAH et al.) 16 October 1984 (16.10.1984)                          | 1-15                  |
| A          | US 4,863,707 A (McSHEA, III et al.) 5 September 1989 (05.09.1989)                  | 1-15                  |

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☐ See patent family annex.

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document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

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